

We claim:

A3 <sup>506</sup> 1. A composition for supplementing nutritional deficiencies in a patient or person in need thereof, comprising vitamin C, vitamin E, chromium, selenium, zinc, and B-complex.

5 2. The composition of claim 1, wherein said patient is afflicted with kidney disease.

3. The composition of claim 2, wherein said kidney disease is end-stage renal disease.

10 4. The composition of claim 1, wherein said patient is suffering from renal insufficiency.

5. The composition of claim 1, wherein said patient is undergoing dialysis therapy.

15 6. The composition of claim 1, wherein said nutritional deficiencies are a result of dietary restrictions.

17 7. The composition of claim 1, wherein said nutritional deficiencies are a result of a disease state.

20 8. The composition of claim 7, wherein said disease state is kidney disease.

9. The composition of claim 8, wherein said kidney disease is end-stage renal disease.

25 10. The composition of claim 1, wherein said nutritional deficiencies are a result of dialysis therapy.

11. The composition of claim 1, wherein said disease state leads to increased oxidative stress in said patient.

30 12. The composition of claim 1, wherein said disease state leads to elevated cholesterol levels in said patient.

13. The composition of claim 1, wherein said disease state leads to elevated homocysteine levels in said patient.

14. The composition of claim 1, wherein said vitamin C comprises ascorbic acid.

15. The composition of claim 1, wherein said vitamin E comprises d-alpha tocopheryl succinate.

16. The composition of claim 1, wherein said chromium is selected from one or more of the group consisting of chromium chloride, chromium picolinate, and chromium tripicolinate.

17. The composition of claim 16 wherein said chromium comprises chromium chloride.

18. The composition of claim 1, wherein said selenium comprises L-selenomethionine.

19. The composition of claim 1, wherein said zinc comprises L-Optizinc ZML-200 Inter-Health™.

20. The composition of claim 1, wherein said B-complex is one or more vitamins selected from the group consisting of pantothenic acid, cyanocobalamin, niacin, pyridoxine, riboflavin, thiamine, folic acid, and biotin.

21. The composition of claim 20, wherein said folic acid is in the range of about 2.25 mg to 2.75 mg.

22. The composition of claim 20, wherein said biotin is in the range of about 270 µg to 330 µg.

23. The composition of claim 20, wherein said pantothenic acid is in the range of about 9 mg to 11.

24. The composition of claim 20, wherein said cyanocobalamin is in the range of about 10.8  $\mu$ g to 13.2  $\mu$ g.

5 25. The composition of claim 20, wherein said niacin is in the range of about 18 mg to 22 mg.

26. The composition of claim 20, wherein said pyridoxine is in the range of about 13.5 mg to 16.5 mg.

10 27. The composition of claim 20, wherein said riboflavin is in the range of about 1.8 mg to 2.2 mg.

15 28. The composition of claim 20, wherein said thiamine is in the range of about 2.7 mg to 3.3 mg.

29. The composition of claim 20, wherein said pantothenic acid comprises d-calcium pantothenate.

20 30. The composition of claim 20, wherein said niacin comprises niacinamide.

31. The composition of claim 1, wherein said vitamin C is in the range of about 45 mg to 55 mg.

25 32. The composition of claim 1, wherein said vitamin E is in the range of about 31.5 IU to 38.5 IU.

33. The composition of claim 1, wherein said chromium is in the range of about 180  $\mu$ g to 220  $\mu$ g.

30 34. The composition of claim 1, wherein said selenium is in the range of about 63  $\mu$ g to 77  $\mu$ g.

35. The composition of claim ~~1~~ wherein said zinc is in the range of about 18 mg to 22 mg.

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A4/ 36. The composition of claim 1, wherein said d-alpha tocopheryl succinate is in the range of about 31.5 IU to 38.5 IU.

37. A composition for supplementing nutritional deficiencies in a patient or person in need thereof, comprising about 45 mg to 55 mg vitamin C, 31.5 IU to 38.5 IU vitamin E, 2.25 mg to 2.75 mg folic acid, 270 µg to 330 µg biotin, 9 mg to 11 mg pantothenic acid, 180 µg to 220 µg chromium, 63 µg to 77 µg selenium, 18 mg to 22 mg zinc, 18 mg to 22 mg niacin, 13.5 mg to 16.5 mg pyridoxine, 1.8 mg to 2.25 mg riboflavin, 10.8 µg to 13.2 µg cyanocobalamin, and 2.7 mg to 3.3 mg thiamine.

38. The composition of claim 37, wherein said composition comprises 50 mg of vitamin C, 35 IU vitamin E, 2.5 mg of folic acid, 300 µg of biotin, 10 mg of pantothenic acid, 200 µg of chromium, 70 µg of selenium, 20 mg of zinc, 20 mg of niacin, 15 mg of pyridoxine, 2 mg of riboflavin, 12 µg cyanocobalamin, and 3 mg of thiamine.

39. The composition of claim 37, wherein said composition is administered to said patient daily.

40. The composition of claim 37, wherein said composition is administered to said patient orally.

41. The composition of claim 37, wherein said composition further comprises a pharmaceutically acceptable carrier.

42. The composition of claim 37, wherein said composition is administered to a patient suffering from kidney disease.

43. The composition of claim 42, wherein said kidney disease is end-stage renal disease.

44. The composition of claim 37, wherein said composition is administered to a patient suffering from renal insufficiency.

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45. The composition of claim 37, wherein said composition is administered to patient undergoing dialysis therapy.

46. The composition of claim 37, wherein said nutritional deficiencies are a result of dietary restrictions.

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47. The composition of claim 37, wherein said nutritional deficiencies are a result of a disease state.

48. The composition of claim 47, wherein said disease state is kidney disease.

49. The composition of claim 48, wherein said kidney disease is end-stage renal disease.

50. The composition of claim 37, wherein said nutritional deficiencies are a result of dialysis therapy.

51. The composition of claim 37, wherein said disease state leads to increased oxidative stress in said patient.

52. The composition of claim 37, wherein said disease state leads to elevated cholesterol levels in said patient.

53. A method for supplementing nutritional deficiencies in a patient comprising the step of administering to said patient a composition comprising vitamin C, vitamin E, chromium, selenium, zinc, and B-complex.

54. The method of claim 53, wherein said patient is afflicted with kidney disease.

55. The method of claim 53, wherein said kidney disease is end-stage renal disease.

56. The method of claim 53, wherein said patient is suffering from renal insufficiency.

57. The method of claim 53 wherein said patient is undergoing dialysis therapy.

58. The method of claim 53, wherein said vitamin C comprises ascorbic acid.

59. The method of claim 53, wherein said vitamin E comprises d-alpha tocopheryl succinate.

60. The method of claim 53, wherein said chromium is selected from one or more of the group consisting of chromium chloride, chromium picolinate, and chromium tripicolinate.

61. The method of claim 60, wherein said chromium comprises chromium chloride.

62. The method of claim 53, wherein said selenium comprises L-selenomethionine.

63. The method of claim 53, wherein said zinc comprises L-Optizinc ZML-200 Inter-Health™.

64. The method of claim 53, wherein said B-complex is one or more vitamins selected from the group consisting of pantothenic acid, cyanocobalamin, niacin, pyridoxine, riboflavin, thiamine, folic acid, and biotin.

65. The method of claim 64, wherein said pantothenic acid comprises d-calcium pantothenate.

66. The method of claim 64, wherein said niacin comprises niacinamide.

67. The method of claim 64, wherein said folic acid is in the range of about 2.25 mg to 2.75 mg.

68. The method of claim 64, wherein said biotin is in the range of about 270 µg to 330 µg.

69. The method of claim 64, wherein said pantothenic is in the range of about 9 mg to 11 mg.

70. The method of claim 64, wherein said cyanocobalamin is in the range of about 10.8 µg to 13.2 µg.

71. The method of claim 64, wherein said niacin is in the range of about 18 mg to 22 mg.

72. The method of claim 64, wherein said pyridoxine is in the range of about 13.5 mg to 16.5 mg.

73. The method of claim 64, wherein said riboflavin is in the range of about 1.8 mg to 2.2 mg.

74. The method of claim 64, wherein said thiamine is in the range of about 2.7 mg to 3.3 mg.

75. The method of claim 53, wherein said vitamin C is in the range of about 45 mg to 55 mg.

76. The method of claim 53, wherein said vitamin E is in the range of about 31.5 IU to 38.5 IU.

77. The method of claim 53, wherein said chromium is in the range of about 180  $\mu\text{g}$  to 220  $\mu\text{g}$ .

5 78. The method of claim 53, wherein said selenium is in the range of about 63  $\mu\text{g}$  to 77  $\mu\text{g}$ .

79. The method of claim 53, wherein said zinc is in the range of about 18 mg to 22 mg.

10 80. The method of claim 53, wherein said alpha-tocopheryl is in the range of about 31.5 IU to 38.5 IU.

81. The composition of claim 53, wherein said nutritional deficiencies are a result of dietary restrictions.

15 82. The composition of claim 53, wherein said nutritional deficiencies are a result of a disease state.

83. The composition of claim 82, wherein said disease state is kidney disease.

20 84. The composition of claim 53, wherein said kidney disease is end-stage renal disease.

85. The composition of claim 53, wherein said nutritional deficiencies are a result of dialysis therapy.

25 86. The composition of claim 53, wherein said disease state leads to increased oxidative stress in said patient.

87. The composition of claim 53, wherein said disease state leads to elevated cholesterol levels in said patient.

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88. A method for supplementing nutritional deficiencies in a patient or person in need thereof, comprising the step of administering to said patient a composition comprising about 45 mg to 55 mg vitamin C, 31.5 IU to 38.5 IU vitamin E, 2.25 mg to 2.75 mg folic acid, 270 µg to 330 µg biotin, 9 mg to 11 mg pantothenic acid, 180 µg to 220 µg chromium, 63 µg to 77 µg selenium, 18 mg to 22 mg zinc, 18 mg to 22 mg niacin, 13.5 mg to 16.5 mg pyridoxine, 1.8 mg to 2.25 mg riboflavin, 10.8 µg to 13.2 µg cyanocobalamin, and 2.7 mg to 3.3 mg thiamine.

89. The method of claim 88, wherein said composition comprises 50 mg of vitamin C, 35 IU vitamin E, 2.5 mg of folic acid, 300 µg of biotin, 10 mg of pantothenic acid, 200 µg of chromium, 70 µg of selenium, 20 mg of zinc, 20 mg of niacin, 15 mg of pyridoxine, 2 mg of riboflavin, 12 µg cyanocobalamin, and 3 mg of thiamine.

90. The method of claim 88, wherein said composition further comprises pharmaceutically acceptable carrier.

91. The method of claim 88, wherein said patient is suffering from kidney disease.

92. The method of claim 91, wherein said kidney disease is end-stage renal disease.

93. The method of claim 88, wherein said patient is suffering from renal insufficiency.

94. The method of claim 88, wherein said patient is undergoing dialysis therapy.

95. The composition of claim 88, wherein said nutritional deficiencies are a result of dietary restrictions.

96. The composition of claim 88, wherein said nutritional deficiencies are a result of a disease state.

97. The composition of claim 96, wherein said disease state is kidney disease.

98. The composition of claim 97, wherein said kidney disease is end-stage renal disease.

99. The composition of claim 88, wherein said nutritional deficiencies are a result of dialysis therapy.

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100. The composition of claim 88, wherein said disease state leads to increased oxidative stress in said patient.

101. The composition of claim 88, wherein said disease state leads to elevated  
10 cholesterol levels in said patient.

102. A method for supplementing nutritional deficiencies in a patient suffering from kidney disease comprising the step of administering to said patient a composition comprising about 45 mg to 55 mg vitamin C, 31.5 IU to 38.5 IU vitamin E, 2.25 mg to 2.75 mg folic acid,  
15 270 µg to 330 µg biotin, 9 mg to 11 mg pantothenic acid, 180 µg to 220 µg chromium, 63 µg to 77 µg selenium, 18 mg to 22 mg zinc, 18 mg to 22 mg niacin, 13.5 mg to 16.5 mg pyridoxine, 1.8 mg to 2.25 mg riboflavin, 10.8 µg to 13.2 µg cyanocobalamin, and 2.7 mg to 3.3 mg thiamine.

20 103. The method of claim 102, wherein said composition comprises 50 mg of vitamin C, 35 IU vitamin E, 2.5 mg of folic acid, 300 µg of biotin, 10 mg of pantothenic acid, 200 µg of chromium, 70 µg of selenium, 20 mg of zinc, 20 mg of niacin, 15 mg of pyridoxine, 2 mg of riboflavin, 12 µg cyanocobalamin, and 3 mg of thiamine.

25 104. The method of claim 102, wherein said composition further comprises pharmaceutically acceptable carrier.

105. The method of claim 102, wherein said composition is administered to said patient daily.

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106. The method of claim 102, wherein said composition is administered to said patient orally.

107. A method for supplementing nutritional deficiencies in a patient suffering from end-stage renal disease comprising the step of administering to said patient a composition comprising about 45 mg to 55 mg vitamin C, 31.5 IU to 38.5 IU vitamin E, 2.25 mg to 2.75 mg folic acid, 270 µg to 330 µg biotin, 9 mg to 11 mg pantothenic acid, 180 µg to 220 µg chromium, 63 µg to 77 µg selenium, 18 mg to 22 mg zinc, 18 mg to 22 mg niacin, 13.5 mg to 16.5 mg pyridoxine, 1.8 mg to 2.25 mg riboflavin, 10.8 µg to 13.2 µg cyanocobalamin, and 2.7 mg to 3.3 mg thiamine.

108. The method of claim 107, wherein said composition comprises 50 mg of vitamin C, 35 IU vitamin E, 2.5 mg of folic acid, 300 µg of biotin, 10 mg of pantothenic acid, 200 µg of chromium, 70 µg of selenium, 20 mg of zinc, 20 mg of niacin, 15 mg of pyridoxine, 2 mg of riboflavin, 12 µg cyanocobalamin, and 3 mg of thiamine.

109. The method of claim 107, wherein said composition further comprises a pharmaceutically acceptable carrier.

110. The method of claim 107, wherein said composition is administered to said patient daily.

111. The method of claim 107, wherein said composition is administered to said patient orally.

112. A method for supplementing nutritional deficiencies in a patient suffering undergoing dialysis therapy comprising the step of administering to said patient a composition comprising about 45 mg to 55 mg vitamin C, 31.5 IU to 38.5 IU vitamin E, 2.25 mg to 2.75 mg folic acid, 270 µg to 330 µg biotin, 9 mg to 11 mg pantothenic acid, 180 µg to 220 µg chromium, 63 µg to 77 µg selenium, 18 mg to 22 mg zinc, 18 mg to 22 mg niacin, 13.5 mg to 16.5 mg

pyridoxine, 1.8 mg to 2.25 mg riboflavin, 10.8 µg to 13.2 µg cyanocobalamin, and 2.7 mg to 3.3 mg thiamine.

5 113. The method of claim 112, wherein said composition comprises 50 mg of vitamin C, 35 IU vitamin E, 2.5 mg of folic acid, 300 µg of biotin, 10 mg of pantothenic acid, 200 µg of chromium, 70 µg of selenium, 20 µg of zinc, 20 mg of zinc, 20 mg of niacin, 15 mg of pyridoxine, 2 mg of riboflavin, 12 µg cyanocobalamin, and 3 mg of thiamine.

10 114. The method of claim 112, wherein said composition further comprises pharmaceutically acceptable carrier.

115. The method of claim 112, wherein said composition is administered to said patient daily.

15 116. The method of claim 112, wherein said composition is administered to said patient orally.

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